

REVIEWS

Flora Mesoamericana, Volumen 1: Psilotaceae a Salviniaceae, edited by R. C. Moran and Ramón Riba. 1995. Universidad Nacional Autónoma de México, Missouri Botanical Garden, and The Natural History Museum (London). ISBN 968-36-4700-6. Available in the U.S. from the Missouri Botanical Garden, Scientific Publications Department, P.O. Box 299, St. Louis, MO 63166. \$77.50. xxii, 471 pp., clothbound.

Thirty pteridologists—principally Robbin C. Moran—contributed to this volume, which includes 1358 species placed in 136 genera. The Flora covers the area from the Mexican states of Tabasco and Chiapas and the Yucatán Peninsula southeast through the country of Panama to its border with Colombia. The Flora was ably translated into straightforward Spanish, and so will have wide readership among both Latin American botanists and those whose first language is not Spanish.

The families of ferns and fern-allies are arranged systematically, but the genera and species are each in alphabetical order. In the case of the family Pteridaceae, which is used in its broadest sense to include *Ceratopteris*, *Acrostichum*, *Neurocallis*, and *Pteris*, this causes complications in the key to the families and places related genera far apart in the text. The key to the families seems mostly workable, although I have never favored using anatomical characters (the number of vascular bundles in the stipes) in such keys, for the observations are difficult to make and destructive of herbarium specimens.

The species treatments are concise, but have sufficient detail, especially in the descriptions, to be useful. They include the accepted name and its type, synonyms only from the Flora area without types, a dozen or more lines of description, a brief but precise habitat statement, one specimen citation from each country or state of Mexico or the Yucatán Peninsula with collector, number, and herbarium of deposit, the elevational range in the Flora area, and the wider range of the taxon. The link between this volume of Flora Mesoamericana mentioned in the introduction and the TROPICOS database maintained at the Missouri Botanical Garden does not extend to specimen data at this time. However, these data will eventually be accessible on the internet.

Overall, the taxonomic treatments are well prepared, which is often difficult when working with specimens over such a wide area. The treatment of *Asplenium* breaks some new ground in suggesting groups within the genus, although it does not assign all the Mesoamerican species to these groups. I did notice a few species that might have been handled differently. *Osmunda regalis* in the New World is divisible into the northern var. *spectabilis* and southern var. *brasiliensis*, both of which occur in the Flora Mesoamericana area. Warren H. Wagner, Jr., demonstrated a few years ago that *Actinostachys germanii* is a presumably juvenile phase of *A. pennula*. *Loxomopsis costaricensis* differs from the South American species *L. pearcei*, to which the Mesoamerican material is attributed, in the characters elucidated nearly a century ago by

Hieronimus; the spore differences are readily seen in SEM preparations. *Solanopteris* is said to be the only myrmecophilous genus of New World ferns; however, ants are known to nest under the flattened, adherent rhizomes of the South American *Microgramma megalophylla*. The Costa Rican Atlantic slope endemic *Polypodium subviride* is placed as a synonym of *P. loriciforme*, which is endemic to central Panama. The two differ sharply in lamina shape, pinna shape, and indument.

A bibliography, glossary, and index conclude the volume. The bibliography contains a large proportion of recent taxonomic papers covering Mesoamerica and sometimes beyond. A few of the words in the glossary have definitions widely divergent from usual. Compare, for instance, the definitions of agudo and cirroso with those in B. D. Jackson's "A Glossary of Botanic Terms."

In accounting for a large and complex flora, as the *Flora Mesoamericana* does, some concessions have to be made to keep the published work to manageable size. In this case, one of the concessions was to not have illustrations. However, it is possible to find illustrations of most of the species in other recently published Central American fern Floras.

This is certainly one of the most important pteridophyte Floras to be published in this century. The authors and editors are to be congratulated. Everyone with an interest in the Mesoamerican ferns should have this book.—DAVID B. LELLINGER, U. S. National Herbarium MRC-166, Smithsonian Institution, Washington, DC 20560.

Scandinavian Ferns, by Benjamin Øllgaard, illustrated by Kirsten Tind. 1993. Rhodos International Science and Art Publishers. ISBN 87-7245-530-6 (paperbound), 87-7245-532-2 (hardcover). 317 pp. Available in the U.S. from Art Consulting: Scandinavia, 25777 Punto de Vista Dr., Monte Nido, Calabasas, CA 91302-2155 (tel. 818-222-1122). \$89.50 (paperbound), \$125.00 (hardcover).

This lavish, folio-size volume, which was first reviewed in *Fiddlehead Forum* 21:1 (1994), is once again available from a U.S. distributor. It covers 72 species and an additional 11 infraspecific taxa of ferns and fern allies that inhabit the Scandinavian countries of Denmark, Norway, and Sweden, the majority of which also occur in northern North America. The introduction briefly presents the basics of Scandinavian climate and geography, and explains that the low diversity and level of endemism relative to other boreal regions around the world (only one taxon is endemic to the region) is due to the harsher effects of Pleistocene glaciation in northern Europe than elsewhere. It also discusses at length the various life-history characteristics of pteridophytes and other factors that have affected taxonomic diversity, such as hybridization, polyploidy, and apogamy. These lucid explanations are a wonderful way for amateurs to learn about the processes that continue to be the topics of many taxonomic and evolutionary research papers in pteridology. The introduction concludes with a discussion of nomenclature and a key to the genera.

A glossary and bibliography occur at the end of the book. However, most of the volume consists of lengthy treatments of the taxa, including keys, descrip-